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Title: The Relationship of Student Teachers' Work En-

vironment Preference to Verbal Classroom Behavior.

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Abstract approved: _____
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This investigation was designed to determine the
relationship of student teachers' commitment to the set
of values, attitudes, and behaviors that are character-
istically fostered and rewarded by bureaucratic organiza-
tions and their verbal classroom behavior under actual
teaching conditions.

The purpose of the study was expressed by the
formulation of an experimental hypothesis and ten specific
null hypotheses.

The instrument used to measure the degree of bureau-
cratic orientation of student teachers was Gordon's (1973)

Work Environment Preference Schedule (WEPS). The verbal classroom behavior of student teachers under actual teaching conditions was assessed by means of the Flanders' Interaction Analysis System (FIAS, 1960). In addition, a brief demographic data sheet was given to the sample to collect personal data about each subject such as age, sex, undergraduate gradepoint average, size of school, subject taught, and number of professional affiliations.

The scores of the WEPS were analyzed and the student teachers were assigned to either the high or low group of bureaucratic orientation. These results were then used in combination with the ten dependent variables of the verbal interaction behavior delineated by the FIAS. The relationships were tested for significance at the .05 level of confidence using Student's t-test.

The findings of the study were:

Under actual teaching conditions, there is no difference in the verbal classroom behavior of student teachers who profess to be unexposed to Flanders' Interaction Analysis System and who score high and low in bureaucratic orientation; this is also true of the verbal classroom behavior of their students. The verbal classroom behavior of student teachers, as measured by the FIAS, can not be predicted from bureaucratic orientation alone, as measured by the WEPS.

It is recommended that supervisors of student teachers

in teacher education programs employ the FIAS as a tool to aid the student teacher in the adjustment of his verbal classroom behavior.

A follow-up study of the verbal and non-verbal classroom behavior of the subjects involved in this study who have become teachers is recommended. Additional recommendations for further research were offered in Chapter V of the study.

The Relationship of Student Teachers' Work Environment
Preference to Verbal Classroom Behavior

by

Dieter Werner Fritz Sturm

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THE RELATIONSHIP OF STUDENT TEACHERS' WORK ENVIRONMENT PREFERENCE TO VERBAL CLASSROOM BEHAVIOR

CHAPTER 1

INTRODUCTION

Background for the Problem

"All social systems and organizations develop a structure and mechanisms to provide for their mainten- ance and continuity" (Selznick, 1943). The bureau- cratic form of professional lifestyles within organi- zational administration is a pattern prevalent today in the field of educational management. Because educa- tional organizations, viz. school districts, provide services that are consumed by society, a structure needs to be generated that permits the organization to identify social needs and objectives with some accuracy. These needs are translated into organizational goals and resources are mobilized for the implementation process (Walton, 1959).

In recent years considerable attention has been directed toward the congruence between individual and organizational variables, such as the student teachers'

role expectation[1] and the prevailing socio-organizational climate - or student teachers' need system and the organizational norm. In the words of Blau & Scott, (1962), "much emphasis has been placed on the influence exerted by the emergent informal relations and group norms as they mold the patterns of conduct of the members of the organization".

The trend toward increasing bureaucratization in Western society, which Weber (1922) had long since foreseen, is not the sole reason for social scientists to turn their attention to this area. A number of empirical studies of the interaction of bureaucracy and personality, described by Merton (1952) have increased the present knowledge of social structure. Because the current prevalence of multifaceted bureaucratic organizations, the identification of individuals who are particularly adaptable to a pyramidal network within a socio-organizational climate of superordination and subordination is a matter of practical concern and value. The implication that the degree of adaptability to hierarchical systems, or bureaucratic orientation, is of some conceivable

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[1]The role of a person is determined by many factors: "Individuals in society occupy positions, and their role performance in these positions is determined by social norms, demands and rules; by the role performances of others in their respective positions; by those who observe and react to the performance; and by the individual's particular capabilities and personality" (Biddle & Thomas, 1966, pg. 4).

consequence to the type of verbal classroom behavior ex-
hibited by the student teacher is of foremost interest
in this study. Finch (1969) sees the educational com-
munity as becoming increasingly concerned about the role
of the student teacher in promoting and stimulating
learning.

There is a sizeable accumulation of literature treat-
ing the effect of teachers' personality traits on the
socio-emotional climate of the classroom (Hanny, 1966;
Burge, 1967; Piele, 1968; Summers, 1970). Considerable
disagreement is evident among social and organizational
theorists, which tends to stimulate further research in
the field. The more thorough the investigation of the
available literature on the subject, the more acute the
realization that more specific and profound inquiries
must be initiated into the relationship between student
teachers' verbal classroom behavior and their particular
personality traits.

Statement of the Problem

The investigator seeks to ascertain whether or not,
under actual teaching conditions, the degree of bureau-
cratic orientation of student teachers who profess to be

unexposed[2] to Flanders' Interaction Analysis is related
to their verbal classroom behavior.

Subproblems

The approach to the general problem was undertaken
by identifying those student teachers who scored high
and low in bureaucratic orientation, as measured by the
Work Environment Preference Schedule (Gordon, 1973).
"High" and "low" are defined as Percentile Ranks of 85
and above and 15 and below, respectively, on the scale.
High and low groups were compared with respect to their:

Subproblem (1)

use of indirect influence on the socio-emotional
classroom climate under actual teaching conditions
as evidenced by the student teacher's verbal be-
havior.

Subproblem (2)

use of direct influence on the socio-emotional
classroom climate under actual teaching conditions
as evidenced by the student teacher's verbal be-
havior.

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[2]The results of a study conducted by Furst (1964, pg.
454-461) indicated that training on Flanders' Inter-
action Analysis System (FIAS) does lead to both attitude
and behavior differences. The student teachers in the
experimental group were able to evidence more use of
accepting teaching behaviors and less of rejecting
teacher behaviors than those student teachers more con-
ventionally trained. They had more student talk in
their classes and were more aware in what they were
doing.

Subproblem (3)

    acceptance of student feelings in the classroom
as evidenced by the student teacher's verbal class-
room behavior.

Subproblem (4)

    use of praise and encouragement in the classroom
as evidenced by the student teacher's verbal class-
room behavior.

Subproblem (5)

    acceptance and clarification of student ideas in
the classroom as evidenced by the student teacher's
verbal classroom behavior.

Subproblem (6)

    student critique and justification of authority in
the classroom as evidenced by the student teacher's
verbal classroom behavior.

This investigation of student teachers' bureaucratic
orientation is, moreover, directed to study those stu-
dents whose student teachers profess to be unexposed to
Flanders' Interaction Analysis System (FIAS) and score
high and low in bureaucratic orientation, as measured by
the Work Environment Preference Schedule and their:

Subproblem (7)

    use of extended responsive verbal behavior under
classroom conditions.

Subproblem (8)

    use of extended initiated verbal behavior under
classroom conditions.

Subproblem (9)

use of student-to-student interaction under
classroom conditions.

Subproblem (10)

use of student-to-student interaction with silence
or confusion under actual classroom conditions.

Purpose of the Study

It is the purpose of this study to determine the
relationship of student teachers' commitment to the set[3]
of values, attitudes, and behaviors that are characteristically fostered and rewarded by bureaucratic organizations
and their verbal classroom behavior under actual teaching
conditions. The elemental objective of this study of a
dimension of student teacher influence in the classroom is
to contribute to better understanding of teacher-to-
student interaction and, in particular, to specify
selected conditions within the realm of the investigation
in which learning may be maximized.

Need for the Study

The effect of bureaucratic orientation on the verbal
classroom behavior of teachers within different hier-
archical systems has been of concern to a number of

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[3]see description of the WEPS instrument on page 28!

social theorists (Merton, 1940). Student teachers are
susceptible to a variety of stimulus patterns generated
by different organizational patterns which tend to
elicit verbal behaviors. Student response signals
are also believed to be dependent upon the socio-
emotional classroom climate established by the verbal
classroom behavior of student teachers. Gordon (1970)
has stressed the need for further research in the realm
of teachers' bureaucratic orientation and its relation-
ship to specific teaching behaviors in the classroom.
Finch (1969) also states that "research in this field is
a must so that there is a new knowledge about the role of
the vocational teacher". Merton (1952) called the studies
of religious, educational, military, economic, and politi-
cal bureaucracies dealing with the interdependence of
social organization and personality formation "an avenue
for fruitful research". Merton (1952) contends that
"empirical studies of the interaction of bureaucracy and
personality should especially increase our understanding
of social structure". Flanders (1961), Piele (1968),
Burge (1967), Price (1971), and Hough (1965) as well as
Anderson (1967), Amidon (1965) and Summers (1970) have
indicated the need for additional research in the area
of teachers' verbal classroom behaviors and personality
traits.

It is advisable that student teachers and classroom

teachers be made cognizant of the fact that systematic

investigation[4] can be conducted in education, utilizing

techniques which may be less precise than the measuring

instruments of the physical scientist but which, never-

theless, are far superior to the unassisted individual

judgment.

Rationale for the Study

For application in this study, teaching behavior of

student teachers has been conceptualized as a series of

overt acts extended over a given period of time. Common

to all secondary education classrooms is the obvious

fact of student teacher control over most classroom ac-

tivities - a seemingly orderly grouping based on estab-

lished hierarchies within the system. According to

Ajzen and Fishbein (1972), "an individual's intention to

perform a given act is a joint function of his attitude

toward performing that act and of his beliefs about what

others expect him to do in that situation".

Certain personality traits appear to inhibit student

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[4]Lazarsfeld and Barton (1951) poing out that "There is a
direct line of logical continuity from qualitative clas-
sification to the most rigorous forms of measurement, by
way of intermediate devices of systematic ratings, rank-
ing scales, multi-dimensional classifications, typolo-
gies, and simple quantitative devices". (Qualitative
Measurement in the Social Sciences, pg. 155)

in-class interaction while other traits exhibited by the student teacher tend to encourage it. The investigator postulates that certain, as yet unidentified, motivational processes in one's global personality affect the teaching climate. Withall's (1949) contention that the primary motivational force of human behavior is a drive toward self-actualization is shared by the investigator. This drive appears to be strongly affected by the individual's need for self-consistency, the self-directive behavior, and the achievement of personal significance and private meanings in a given social milieu.

A review of selected research (Withall, 1949), corroborates the investigator's assumption that the student teacher's verbal behavior influences the conditions of learning[4a] in the classroom since he has been placed in the classroom to manipulate the conditions so as to facilitate learning experiences. All efforts extended in this study have been directed toward the ultimate improvement of instruction and the greater understanding of the relationship between the socio-emotional climate in the classroom and the student teacher's degree of bureaucratic orientation.

[4a]Although the available literature has been carefully reviewed, no evidence has been adduced to lend support to the investigator's contention that student teachers' verbal classroom behavior significantly affects student learning outcomes.

Experimental Hypothesis

From the statement of the problem, an experimental hypothesis can be formulated:

> H.: The degree of bureaucratic orientation of student teachers is related to their verbal classroom behavior under actual teaching conditions.

Student teachers' bureaucratic orientation is measured by Gordon's (1973) Work Environment Preference Schedule (WEPS). The verbal classroom behavior of student teachers and their students under actual teaching and classroom conditions is assessed by means of the Flanders' Interaction Analysis System (1960).

Assumptions

The investigator has made the following assumptions:

1. The observable behavior of an individual student teacher is an adequate sample of his total behavior.

2. The verbal statements within the classroom of a student teacher are consistent with his non-verbal total behavior.

3. Verbal classroom behavior can be objectively observed and analyzed as a group process and that, for a given period of time, meaningful behavior

interpretations can be made.

4. The behavior observed under data-collection conditions does not differ from behavior under ordinary teaching conditions. The presence of the investigator or the tape recorder does not affect normal classroom verbal behavior.

5. The verbal classroom behavior of student teachers observed in one situation shares certain fundamental relationships with student teachers studied in other situations.

Delimination

Although certain demographic data were collected, such as the student teachers' undergraduate grade point average, age, sex, size of school, and number of memberships or affiliations with professional organizations, no attempt is made to compare and analyze these data or their relationship to verbal classroom behavior.

Limitations of the Study

1. The classroom verbal behavior manifestations collected for this study are exclusively those which can be observed, identified, and scored by the Flanders Interaction Analysis System (FIAS).

2. The subjects for this study are drawn from a population of student teachers enrolled at the Oregon State University, Corvallis, Oregon, and are fulfilling their student-teaching assignment in secondary schools in the Willamette Valley.

3. The student teachers were selected for student teaching by their departments. The criteria used by the departments for selection were not controlled by the investigator.

4. Evaluative judgment of the raters using the Flanders Interaction Analysis System may be a source of systematic or random error in scores for particular behaviors.

5. Specific student and student teacher behaviors, such as unacknowledged internal states, were not controlled by the investigator.

6. No control was exercised over the individuals' self-reported attitude and the correlation with their actual behavior toward the object of the attitude.

7. Differences between those student teachers who agreed to participate in the study and those who declined were not controlled.

8. Consonance between bureaucratic orientation of student teachers and their cooperating teachers

and university supervisor has not been controlled.

9. No control was exercised over the differences among the schools in which the student teachers completed their assignments.

10. Differences in the degree of insight and understanding into what the WEPS or FIAS measure were not controlled.

11. Classroom verbal behavior may, to a certain degree, be rote execution of instructions by supervisors and cooperating teachers to student teachers.

12. Non-verbal behavior characteristics of student teachers and their students were not controlled.

13. Questionnaires have the obvious disadvantage of signalling, all to distinctly, to the respondent just what the investigator is interested in, thus producing response bias.

14. The degree of bureaucratic orientation professed by student teachers does not necessarily indicate the probable course of their actions. Even if the subject intentionally distorts his response on the WEPS, the investigator is measuring at least the degree of bureaucratic orientation the subject is trying to make others believe that he possesses.

Definition of Terms

Actual teaching (classroom) conditions: Teaching con-
ducted in a public school classroom or laboratory involv-
ing lessons taught by student teachers to regularly en-
rolled students.

Authority conflict: The conflict between professional
autonomy and bureaucratic authority in the public school.

Bureaucracy: The superimposition of systems of authority,
status, competence and communication upon one another and
the structuring of administrative organizations in a hier-
archical order (Max Weber, 1922)

Bureaucratic orientation: The commitment to the set of
values, attitudes, and behaviors that are characteristi-
cally fostered and rewarded by bureaucratic organizations,
as measured by WEPS (Gordon, 1970).

Compartmentalization: Complete confidence in expert
judgment and the need to restrict one's concern to one's
own area of specialization (Gordon, 1970).

Direct teacher influence: Student teacher verbal class-
room behavior, as measured by three categories (student
teacher lectures, gives directions, and criticizes or
justifies authority) of the Flanders Interaction Analysis
System, restricts the freedom of students and makes them
more dependent on the classroom teacher.

Impersonalization: A preference for impersonal and formal relationships with others on the faculty, particularly with individuals at different organizational levels (Gordon, 1970).

Indirect teacher influence: Student teacher verbal classroom behavior, as measured by the four categories (student teacher accepts students' feelings, praises and encourages students, uses students' ideas and, asks questions) of the Flanders Interaction Analysis System (FIAS), which expands the freedom of students in the classroom and affords them less dependency on the student teacher.

Interaction analysis: A systematic method of analyzing verbal interactive (student teacher-to-student, student-to-student) classroom behavior.

Junior High School: Grades seven, eight, and nine; or nine and ten;

Matrix: A 10-row by 10-column table containing FIAS scores.

Rule conformity: A desire for the security that the following of rules, regulations, and a standard operating procedure affords (Gordon, 1970).

Self-subordination: A willingness to comply fully with the stated wishes of a superior and to have decisions made for one by higher authority (Gordon, 1970).

Senior high school: Grades 11 and 12, or 10, 11, and 12;

Socio-organizational climate: A milieu purported to exist in a social organization with an ordered arrangement of individual human interactions.

Socio-emotional climate: The interaction between institutional expectations and human personalities which regulates the emotional tone in the relationship between the student teachers and their students.

Student teacher: An advanced student in a professional educational curriculum who is completing practicum requirements of one term full-time assignment to a secondary school for supervised practice teaching.

Traditionalism: The need for the security provided by organizational identification and conformity to the in-group norm (Gordon, 1970)

Unacknowledged internal states: A condition under which the ongoing behavior is not accompanied or followed by a statement, oral or written, which labels the internal states (feelings, motives, interpretations of the event) that makes the behavior appropriate for the individual at that moment (Butman, 1974).

Verbal classroom behavior: The verbalization of student teachers and students in the classroom which can be observed, identified, and recorded using the FIAS.

Work environment: An environment conceptually and empirically related to the task comprising the job, the nature of supervision, and the overall socio-organizational

climate (Gordon, 1970).

Summary

It is the purpose of the preceding pages to identify the problem under study and to present to the reader the essential background information which underlies the research development.

Examination of research data contributing to this study included those of Weber (1922), Merton (1940, 1952), Blau and Scott (1962), and Gordon (1970, 1973). This writer intended to show the existence of a pronounced need for this study and to adduce evidence to justify this investigation by referring to recognized scholars.

The purpose of the study is to elucidate the relationship between two specified dimensions, namely bureaucratic orientation and verbal behavior. The investigator hypothesized that the degree of bureaucratic orientation of student teachers is related to their verbal classroom behavior under actual teaching conditions. The rationale for the study evidences agreement with Withall's (1949) contention that the primary motivational force of human behavior is a drive toward self-actualization.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

Bureaucratic Orientation

The classic bureaucratic model is classified by
Gordon (1970) as a pyramid of positions which are ordered
into a hierarchical system of superordination and sub-
ordination. Each position has well-defined activities
and responsibilities, demanding specialized competence.
With authority delimited to that which is necessary for
the discharge of its duties, employees function as rep-
resentatives of a particular position which define the
degree of formality and the nature of the relationship to
be observed. Ultimate control of the hierarchy rests at
the top of the organizational frame. Reliability of be-
havior is maintained by directives, by rules and regula-
tions, and by standard operating procedures which des-
cribe the exact manner in which the duties are to be per-
formed.

Max Weber (1952) characterizes the ideal-type bureau-
cracy as possessing hierarchically arranged, continuously
operating offices, the behavior of whose occupants is
channeled and circumscribed by general rules. Bureau-
cratic authority, says Weber, resides in the office, not

in the occupant, while official activity is separated from private life.

Notable studies which lend significant support to the investigator's research effort are cited here. Gordon (1970) discovered very pronounced relationships between bureaucratic orientation and authoritarianism as measured by the California F-Scale (Adorno et al., 1950). Rokeach's (1960) measure of dogmatism appears to be congruent with the bureaucratic theory as well. Significant positive correlation was found between Couch's (1960) measure of Internal-External Control and a measure of bureaucratic orientation (WEPS), where high scores supposedly reflect a belief that hard work pays off. Acquiescence (Couch & Keniston, 1960) which was assumed to be related to bureaucratic orientation, was found to correlate significantly with the Work Environment Preference Schedule (WEPS), but to a substantially lesser degree than Couch's I-E Control.

Gordon found no significant relationships between bureaucratic orientation and feelings of anxiety (Taylor, 1953). Neither social pessimism, as reflected in the Anomie Scale of Srole (1956), nor the making of socially desirable responses, as measured by Crowne and Marlowe (1964), showed significant relationships to bureaucratic orientation.

The pertinent relationship of bureaucratic orientation
to structure in the school systems was analyzed by K. Punch
(1967) who used six dimensions seen as continuously dis-
tributed variables. Applying Hall's (1961) Organizational
Inventory which isolates the six central dimensions of
bureaucratic structure (I. hierarchy of authority; II.
specialization; III. rules for incumbents; IV. procedural
specifications; V. impersonality; VI. technical competence),
Punch clarified the key definitional issue; bureaucratic
structure in the schools is realistically conceptualized
as a unitary, homogeneous variable restricted only to the
dimensions of hierarchy of authority, rules of incumbents,
procedural specifications, and impersonality.

Moeller (1966) employed scale analysis of
dichotomous ratings by judges to classify school systems
by degree of bureaucratization. Moeller's research empha-
sizes a system where the rating scale of bureaucratic
dimensions (high and low) either confirms or denies the
existence of bureaucratic structure which contrasts with
the system of continuous variables as proposed by
Punch (1967).

Hartley (1964) developed a 30-item, Lickert-scaled
instrument which incorporated more than twenty bureau-
cratic characteristics. Hartley's scale stood up well to
statistical analyses and proved quite adequate for the

intended purpose. The overall bureaucratization score
was determined by compiling the responses to the thirty
items, under the assumption that bureaucratization in-
corporates unidimensional characteristics.

An interesting study initiated by Gouldner (1957)
identifies two groups among a selected faculty: Locals
and Cosmopolitans. Cosmopolitans were oriented toward
professional organizations; their chief objective was
eminence in their own subject matter area. Locals en-
dorsed the values of the institution; their chief ob-
jective was stature with the institution. They did not
share the Cosmopolitans' identification with the nation-
al professional organizations. Gouldner also observed
that faculty members with a high degree of commitment[5]
and orientation to their professional organizations were
less committed to the institution in which they function-
ed.

James Anderson's (1968) research revealed socio-
organizational relationships of interest for this study.
He observed positive relationships between the number
of bureaucratic rules and the size of the socio-organiza-
tional setting (large departments show stronger bureaucratic

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[5]Anderson defined the commitment index as a composition
of the number of years taught plus the number of years
taught in the present school district.

tendencies) and the number of female teachers (a high percentage of female teachers was associated with more bureaucratization). Anderson identified inverse relationships between the degree of school bureaucratization (number of rules) and the socio-economic level of the school community (low socio-economic areas evidenced a higher degree of school bureaucratization), the routinizability of activities, the specificity of goals (the more esoteric the goal, the greater the number of bureaucratic rules), the competence or tenure of teachers (more tenure, fewer rules), and the commitment or experience of the teachers (more experience, fewer rules). Anderson disclosed, contrary to common belief, that teachers in socio-organizational settings characterized by a high degree of bureaucratization experience significantly less authority conflict than do teachers in less bureaucratic settings. Although the degree of school bureaucratization was said to be positively related to the socio-economic level of the school community, Anderson noted that teachers in schools having students of low socio-economic class were more informal and less impersonal in their treatment of students and were less resistant to innovation.

Because of the tendency to assign each teacher (or student teacher) to a specific role in which he quickly

becomes identified, and the tendency of the teacher (or
student teacher) to construe that role narrowly, resistance
to innovation is built into the organization. Routine
operations will become sterile ends in themselves rather
than effective means to desirable ends. When their pro-
fessional expectations are frustrated, some teachers will
abandon their flexibility for a bureaucratic orientation
characterized by apathy, rigid adherence to rules and reg-
ulations, and impersonal attitude toward the student body,
and a search for cues from administrators before making
decisions. Thus when instructional procedures are speci-
fied, the onus for failure of students to achieve is re-
moved from the teacher. As long as he adheres to the cur-
riculum guide and to accepted procedures, the blame can
be shifted to the student or to the procedure, whichever
is most expedient. These unprofessional behaviors, though
decried by administrators, school boards, and the communi-
ty, are the result of bureaucratically structured school
systems that foster and reinforce such behaviors per-
functorily.

Similarly, Barry Anderson (1970) noted an associa-
tion between bureaucratization and student alienation,
especially with feelings of powerlessness on part of the
students. Anderson's study reveals a strong negative as-
sociation between students' social class and attempts to
control their behavior.

An inverse correlation between school bureaucratiza-
tion and student achievement found by MacKay (1964) under-
scores the data presented by Barry Anderson later. Mac-
Kay and Barry Anderson seem to be in agreement over the
undesirable effects caused by the presence of bureaucratic
structure in schools. Both contend that students in such
schools often exhibit feelings of powerlessness and lack
achievement motivation.

It seems evident that the degree of school bureaucrat-
ization affects the style of verbal interaction in the
classroom. Bureaucratic orientation, as defined in this
study, appears to be present at all occupational levels
and is closely associated with a variety of personality
characteristics.

Socio-emotional Climate

Early studies in the field of social clubroom cli-
mates were initiated by Lippitt's (1940) research with
members of four different clubs who experienced exposure
to various types of leadership, autocratic leadership and
democratic leadership styles. Lippitt concluded in his
study that (1) the different leadership styles produced
different social climates and resulted in different group
and individual behaviors; (2) the conversation categories
differentiated leader-behavior techniques more adequately

than social-behavior categories; (3) autocratic leadership elicited either aggressive rebellious behavior toward the leader or apathetic submission; (4) leadership style was the primary factor in producing differences in social climates and that club personnel was of secondary importance.

For the purpose of measuring the socio-emotional classroom climate Withall (1949) constructed a "climate index". This index discriminated between learner-centered behavior and teacher-centered behavior. In his study, involving junior high school classes and employing the newly developed climate index, he observed that students of learner-centered classrooms had significantly more positive emotional reactions toward teachers than did students in teacher-centered classrooms.

This effect of socio-emotional climates in specific classroom settings on student-to-teacher rapport has been investigated by Medley and Mitzel (1958). They found that students who reported good rapport with their teachers were encountered more often in classrooms where an open, democratic climate prevailed than in classrooms where rigidity and autocracy dominated the socio-emotional classroom climate.

Supporting the findings of Medley and Mitzel was the research of Ned Flanders (1962) on the socio-emotional

climate and student response and achievement. Flanders
states that students who depended more on direct verbal
influence of teachers scored lower on social studies and
mathematics achievement tests than did students of teach-
ers who relied more distinctly on indirect verbal influ-
ence.

A study by Summers (1970) in which he investigated
the relationship of organizational climates of schools
and selected personal variables of teachers with verbal
interaction behavior of elementary school teachers in
Southern Illinois, is relevant to the present study.
Summers used the Organizational Climate Description
Questionnaire (OCDQ) in conjunction with Flanders' Inter-
action Analysis System (FIAS) and observed that more si-
lence or confusion occured in the classrooms of younger
teachers who were not seeking advanced degrees. In gen-
eral, Summers uncovered the relationship of organizational
climate with those teaching behaviors which relate di-
rectly to discipline. Further, employing the FIAS inter-
pretations of the verbal interaction variables, Summers'
study indicates that the teachers who perceive their cli-
mates as unstructured tend to incur more "discipline
problems", relate more directly with the students in terms
of giving directions or criticizing or justifying author-
ity, and find more recalcitrance on the part of the

students than do teachers who perceive their climates as structured.

A comparable study undertaken by Hanny (1966) to determine the relationship between certain personality characteristics and teacher verbal classroom behavior, reveals that under simulated teaching conditions open-minded and closed-minded (Rokeach, 1960) teachers untrained in interaction analysis differed in their use of direct influence and that the students of those teachers differed in the amount of extended talk.

Hanny's study has been extended by Piele (1968) who included teachers' verbal classroom behavior under actual teaching conditions, rather than simulated. Piele concluded that open- and closed-minded teachers appear to differ in their (a) use of a variety of verbal behaviors and in their (b) monopolization of talk in the classroom, and that their students appear to differ in their (a) use of extended responsive talk, (b) use of student-to-student interaction, and (c) use of student-to-student interaction with silence of confusion.

In an attempt to determine if a personality instrument administered to student teachers prior to student teaching would be helpful in predicting some of their verbal behavior in the classroom, Burge (1967) undertook to study this. He concluded that verbal behavior of

student teachers as measured by Flanders' Interaction Analysis System (FIAS), and personality of student teachers as measured by the Edwards Personal Preference Schedule (EPPS) are not related except by chance. Furthermore, verbal behavior as measured by the FIAS cannot be predicted by use of the EPPS prior to student teaching, except by chance.

Similarly, but using different independent variables, Price (1971) attempted to identify and compare the verbal behaviors of junior college teachers with differences in (1) years of teaching experience, (2) hours of graduate professional education, (3) hours above the master's degree in the teaching field, and (4) years of work experience in industry, business, or other areas related to the teaching field. The results of his inquiry indicate that there are very few differences in the classroom climate of junior college teachers who differ in the number of years of teaching experience, who differ in the number of hours of graduate study in professional education and in the teaching field above the master's degree, or who differ in the number of years of related work experience.

Summary

This chapter provided a brief review of the most

pertinent studies associated with appropriate personality measures and socio-emotional climate appraisals. The review is indicative of the lack of an existing theoretical framework to identify the relationship between bureaucratic orientation or similar personality traits and verbal classroom behavior. A number of noteworthy studies have been abstracted in order to show the significance of socio-emotional climate control in group situations where the categorization of verbal classroom behavior as a means of assessing the quality of group coexistence provides a sound basis for the methodology of this study. The research cited in the review provides sufficient evidence that reliable patterns of teacher and student behavior in the classroom can be obtained through categorization of their overt behavior.

The literature review on the socio-emotional climate illuminates its effects on teaching behavior, learning, and achievement, and the emotional tone which is a concomitant of interpersonal interaction. Research, especially that of Withall, has shown that some relationship exists to the degree of acceptance among members with similar needs and goals.

CHAPTER III

METHODOLOGY

Introduction

The review of the literature indicated that certain personality variables seem to influence the verbal classroom behavior of teachers. The assessment of the variables for this study necessitated the administration of two measuring instruments: (1) the Work Environment Preference Schedule to assess the degree of bureaucratic orientation, and (2) the Flanders' Interaction Analysis System to assess the verbal classroom behavior under actual teaching conditions. This chapter briefly describes these instruments, their psychometric purpose, and application.

Instrument I.: The Work Environment Preference Schedule (1973)

The Work Environment Preference Schedule[6] (WEPS) is designed to measure a personality construct, "bureaucratic

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[6]Bureaucratic orientation, as measured by the WEPS, like authoritarianism and dogmatism, appears to be an important personality construct in its own right. It classifies a type of behavior that is both prevalent and socially significant, and differs from constructs measured by other available instruments.

orientation", which reflects a commitment to the set of values, attitudes, and behaviors that are characteristically fostered and rewarded by bureaucratic organizations. High scores on the WEPS are obtained by individuals who accept authority, who prefer to have specific rules and guidelines to follow, who prefer impersonalized work relationships, and who seek the security of organizational and in-group identification. Low scores are generally obtained by individuals who do not characterize themselves in that way.[7]

Scores on the WEPS can be, according to Gordon (1973), related to personnel turnover and organizational morale. The WEPS bases its descriptive schema on categories developed by Max Weber (1922) who identifies the common denominator characteristics of bureaucratic organizations as the Herrschaft der Amtsstube[8].

The paragraphs that follow will elucidate the specificities of each instrument used in the study. Validity, reliability, administration procedures, scoring, scales

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[7]In practice, an individual's verbal self-report has been relied upon almost exclusively for interferences about his attitude. Despite Green's (1954) assertation that attitudes and values involve response covariation, his chapter in the Handbook of Social Psychology is devoted entirely to a consideration of various kinds of attitude scales dependent upon verbal response.

[8]Translated from the German by the investigator: Rule of the office. A term more often applied in a derogative sense than to indicate efficacy of bureaucratic machinery.

and norms, and matrix functions will be circumscribed.

<u>Validity</u>: The WEPS manual reports all pertinent validities for personal and interpersonal values with detailed information as to each type of inference. Highly consistent significant relationships are observable in WEPS's four value scales: positive directions with (1) conformity and (2) orderliness, negative directions with (3) independence and (4) variety. In addition, significant relationships are noted for seven value dimensions: (1) recognition, (2) practical-mindedness and (3) goal orientation in a positive direction, and in a negative direction with (4) benevolence, (5) leadership, (6) achievement and (7) decisiveness.

Validity studies have been conducted with the American Oil Companies, the New York State Department of Mental Hygiene, the military, and a variety of groups in India as well as in Japan. Coefficients of correlation between the WEPS and the six scales of the Allport, Vernon, and Lindzey "Study of Values" (1960) were computed for one and the same sample for personal and interpersonal values. The WEPS was found to correlate significantly with the two scales: in a positive direction with the Economic Value (.48) and in a negative direction with the Aesthetic Value (-.34).

These scores reported by Allport <u>et</u> <u>al</u> indicate that

the more bureaucratic individual is inclined to have a
higher regard for what is useful and for the practical
affairs of the business world, and to be less interested
in a diversity of experience or the artistic episodes of
life. Scores on the WEPS are also positively associated
with religious conservatism as measured by the Couch
(1960) scale. Predictive validity[8a] for Boston College
Air Force ROTC students (Biserial r= .44, significant at
the .01 level) is shown in the WEPS manual. The criteria[8b]
are described adequately in validity tests for two samples
of male teachers in India, using both the Biserial (r= .40,
at the .05 level of significance) and the Product-moment
(r= .58, at the .01 level of significance) correlation.
Reliability: The reliability of the WEPS, or its consis-
tency of measurement, is shown in a table format in the
manual. The internal consistency reliability of the
WEPS was found to be .91, .89, .84, and .83, respectively,
for samples of Peace Corps volunteers, guidance counse-
lors, business administration students, management stu-
dents, and U.S. Military Academy students. The samples
are adequately described and indications have been made
as to the procedures used. Two groups were given repeated
testing and the stability coefficient was found to be .82
and .65, for high school students working during Summer

[8a]The criterion was: Retention vs. dropout
[8b]Decision to strike: Non-strikers vs. strikers

for Western Electric, and for Army ROTC students respec-
tively. The publisher of the WEPS test and manual is the
Psychological Corporation of New York (1973).

Administration and Scoring: The WEPS consists of 24 items,
is self-administrating, and the required information on
the test directions is presented in full on the test form
itself. There is no time limit and each person should be
permitted to finish. Most people will complete the WEPS
in ten minutes or less. Only one single score is obtained
with no scoring key needed. The instructions for scoring
are concise and easy to understand, requiring no specific
skills. Instructions are given in the manual for forms
which were handed in as uncompleted. If four or fewer
responses were omitted, the test can still be salvaged by
adhering to the test publisher's instructions. Explicit
instructions are given for scores which deviate from the
"correct" responses, i.e. if more than one answer was
marked.

Scales and Norms. The traditional Lickert scales were
employed in the WEPS. Weights ranging from 1 to 5, or
from "Strongly agree" to "Strongly disagree". Weights
for "Strongly agree" and "Agree" were the same (+2),
weights for "Undecided" and "Disagree" were also the
same (+1), while weights for "Strongly disagree" were
zero. This scoring method which considers "extremeness
of response set" variance as potentially valid variance,

has generally been found to yield higher validities than either other methods. The Norms Table in the manual provides percentile equivalents (percentile ranks) for each possible score, facilitating easy scoring of the test forms. Eleven norm groups are listed with two norm groups subdivided into males and females. At the bottom of each norm group the sample size, the mean, and the standard deviation are listed for each group.

Instrument II.: The Flanders Interaction Analysis System (1960)

The Flanders Interaction Analysis System (FIAS) is designed to record the verbal interactive (student-to-student teacher) classroom behavior observable under actual teaching (classroom conditions). The FIAS (Figure 1) categorizes verbal classroom behavior into three major spectra: (1) teacher verbal behavior, (2) student verbal behavior, and (3) silence or confusion.

Teacher verbal behavior is divided into two prime categories: (1) indirect teacher influence and (2) direct teacher influence. The teachers' (student teachers') being at liberty to choose the type of verbal behavior to be employed, may inhibit or foster student verbal behavior. Indirect teacher influence, used to elicit student commentary, consists of four observation categories:

Figure 1

CATEGORIES FOR INTERACTION ANALYSIS

TEACHER TALK	INDIRECT INFLUENCE	1.*	ACCEPTS FEELING: accepts and clarifies the feeling tone of the students in a non-threatening manner. Feelings may be positive or negative. Predicting or recalling feelings are included.
		2.*	PRAISES OR ENCOURAGES: praises or encourages student action or behavior. Jokes that release tension, not at the expense of another individual, nodding head or saying, "um hm?" or "go on" are included.
		3.*	ACCEPTS OR USES IDEAS OF STUDENT: clarifying, building, or developing ideas suggested by a student. As a teacher brings more of his own ideas into play, shift to category five.
		4.*	ASKS QUESTIONS: asking a question about content or procedure with the intent that a student answer.
	DIRECT INFLUENCE	5.*	LECTURING: giving facts or opinions about content or procedure; expressing his own ideas, asking rhetorical questions.
		6.*	GIVING DIRECTIONS: directions, commands, or orders to which a student is expected to comply.
		7.*	CRITICIZING OR JUSTIFYING AUTHORITY: statements intended to change student behavior from nonacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing; extreme self-reference.
STUDENT TALK		8.*	STUDENT TALK--RESPONSE: a student makes a predictable response to teacher. Teacher initiates the contact or solicits student statement and sets limits to what the student says.

Figure 1

CATEGORIES FOR INTERACTION ANALYSIS (cont.)

STUDENT TALK

9.*   STUDENT TALK--INITIATION: talk by students
       which they initiate. Unpredictable state-
       ments in response to teacher. Shift from
       8 to 9 as student introduces own ideas.

10.*   SILENCE OR CONFUSION: pauses, short periods
       of silence and periods of confusion in
       which communication cannot be understood
       by the observer.

*There is NO scale implied by these numbers. Each number
is classificatory, it designates a particular kind of com-
munication event. To write these numbers down during ob-
servation is to enumerate or describe, not to judge a posi-
tion on a scale.

(1) accepting feelings, (2) praising or encouraging, (3) accepting ideas of students, and (4) asking questions. Direct teacher influence, used to diminish or curtail student commentary, is divided into three categories: (1) lecturing, (2) giving directions, and (3) criticizing or justifying authority.

Student verbal behavior is divided into two categories: (1) student talk - response, and (2) student talk - initiation.

Category ten is used to denote silence and/or confusion.

Since it has been adequately demonstrated by Aschwald (1969) that additional verbal activity will not seriously impede the basic pattern already established and that observer fatigue could affect recorder judgments, the 400 tally or twenty-minute observation period[9] is acceptable for this study.

In order to record the verbal interactions observed in the classroom, every three seconds a trained observer records the category number of the verbal classroom behavior noted. The recorder(s)[10] need not be physically present in the classroom since the classroom behavior

_____

[9]Since there are twenty observations per minute, each twenty-minute observation session produces @ 400 tallies.

[10]Individuals using the FIAS

being coded is verbal and can be recorded on audio tape
for later analysis.

FIAS Recording Procedure

Behavior category numbers were recorded on a tally
sheet which provides 400 entries or twenty minutes of
verbal classroom interaction for each student teacher.
The recorded category numbers of the FIAS were then en-
tered into the appropriate cells of a specially-prepared
10-row by 10-column matrix[11] (Figure 2). For instance,
assume that an observer has recorded the following be-
havior categories on his tally sheet: 10 - 4 - 5 - 7 - 9.
To tabulate these observation scores on the matrix, the
first step is to make sure that the entire series begins
and ends with the same number. The number ten has been
chosen since it represents silence. Unless a number ten
has already been recorded, it must be added by the ob-
server to the beginning and the end of the series. The
series shown above then becomes: 10 - 4 - 5 - 7 - 9 - 10.
This procedure is followed to produce a finished matrix
in which the sum of column one equals the sum of row one,
the sum of column two equals the sum of row two, etc.

The behavior category numbers are then tallied in the
matrix (Figure 3) one pair at a time. The column is used

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[11]Rows are horizontally, columns are vertically arranged

Figure 2

MATRIX FOR FLANDERS INTERACTION
ANALYSIS SYSTEM

STUDENT TEACHER OBSERVED:_____

DATE OF OBSERVATION:_____

OBSERVER:_____

CATEGORY	1	2	3	4	5	6	7	8	9	10	TOTAL
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
TOTAL											
% GT											
% TT											

FIGURE 3.   Matrix with 9 sample tallies

#	1	2	3	4	5	6	7	8	9	10
1										
2										
3										
4				l	l					
5					l		l			
6										
7							l		l	
8										
9										l
10				l						

for the second number, the row is used for the first

number. The numbers are then paired as shown here:

(10 - 4)
   (4 - 5)
      (5 - 7)
         (7 - 9)
           (9 - 10)

The first pair is 10 - 4: the tally is placed in row ten,

column four cell. The second pair if 4 - 5; this tally

is inserted in row four, column five. Each pair overlaps

with the next and the total number of observations, "N",

always will be tabulated by N - 1 tallies in the matrix.

Each of the hypotheses in this study encompasses a

specific type of verbal behavior as shown in each of the

hypotheses in this study with the matrix location and

interpretation of the stated verbal behavior, the verbal

behaviors to be analyzed can be readily identified. Fig-

ure three illustrates the results of this matching pro-

cess. The matrix location of the areas and cells identi-

fied in Figure four are graphically presented in Figure

five.

The Sample

The parent population for this study consists of

180 student teachers. All were enrolled in education

seminars at the Oregon State University, Corvallis, Oregon,

during the Winter and Spring terms, 1975. The student

Figure 4. Description of Verbal Classroom Behavior

Hypothesis	Type of Verbal Behavior	Matrix Location and Interpretation Procedure
H.1	Indirect teacher influence	Area A (Figure 5)
H.2	Direct teacher influence	Area B (Figure 5)
H.3	Acceptance of student feelings	Total occurence of category one (column 1)
H.4	Praise and encouragement	Total occurence of category two (column 2)
H.5	Acceptance of student ideas	Total occurence of category three (column 3)
H.6	Criticism and justification of authority	Total occurence of category seven (column 7)
H.7	Extended student responsive verbal behavior	Total number of tallies in cell 8-8 (Figure 5)
H.8	Extended student initiated verbal behavior	Total number of tallies in cell 9-9 (Figure 5)
H.9	Student-to-student interaction	Area C (Figure 5)
H.10	Student-to-student interaction with silence or confusion	Area C + Area D (Figure 5)

FIGURE 5.   Matrix Location of Areas

teachers were selected for student teaching by their departments.

The Work Environment Preference Schedule (WEPS), accompanied by a brief demographic questionnaire, was administered to all voluntarily participating student teachers during the first two weeks of their student teaching assignment. Twenty-two student teachers chose not to participate in the study after the research objective had been explained to them.

The sample group for this study has been randomly selected from the two groups of student teachers whose WEPS scores were below the 15th percentile rank and above the 85th percentile rank when compared with the norm group.[12]   Thirteen high and 13 low scorers were selected from that group for this study. All subjects of the study professed to be unexposed to the Flanders Interaction Analysis System (FIAS). Since the two experimental sample groups are relatively small and the absence of control over the selection of the parent population has been recognized, the investigator elicited specific demographic data from each of the subjects: age, sex, undergraduate gradepoint average, size of school in which the subject student-teaches, and affiliations with professional

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[12]Gordon's norm group is comprised of college students of liberal arts, education, and business education majors representing the principal regions of the country.

organizations.

The demographic data compiled in Tables I and II reflect subjects of the sample group who scored below the 15th percentile rank and subjects who scored above the 85th percentile rank on the WEPS and their self-reported demographic specificities.

No attempt was made to compare or statistically analyze the demographic data of the sample group with respect to verbal classroom behavior. The sole purpose for presenting the data of the experimental sample is to illustrate the composition of the sample group.

Cursory examination of the demographic data reflects that male subjects of the sample scored higher on the WEPS than did females of the same group. Also, subjects of the sample who earned an undergraduate GPA ranging from 2.51 to 3.00 scored higher on the WEPS than those subjects whose undergraduate GPA falls between 3.01 and 3.50, or above.

The demographic data on age, size of school, subject taught, and professional affiliation are shown in the Appendix, Tables I and II.

Procedure

Each student teacher of the sample group was contacted

at the school in which he[13] performed his student teaching assignment. Each student teacher was then observed in the classroom under actual teaching conditions for a total of six 20-minute class sessions. With the exception of two incidents, classroom interactive verbal behavior was recorded with the recorder physically present in the classroom. Audio tape recording was kept at an absolute minimum and was used only when the recorder's presence in the classroom was not feasible, or at the expressed request of the student teacher. The classroom visitations were randomly varied in order to collect data which was representative of typical verbal classroom behavior. The classroom interaction analysis data were then accumulated by observing, classifying, and recording the verbal classroom behavior by using the FIAS. Observer reliability has been checked thrice by means of the Scott's Coefficient[14] which was found most suitable for use in this investigation. The measured observer reliability "pi" was .83, .87, and .89. The formula employed to compute "pi" is shown below:

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[13]For the purpose of simplicity masculine pronouns have been used throughout the study to denote both sexes.

[14]Scott's method is unaffected by low frequencies, can be adapted to percent figures, can be estimated more rapidly in the field, and is more sensitive at higher levels of reliability.

Scott's Coefficient "pi":

$$\text{"pi"} = \frac{P_o - P_e}{1 - P_e} \quad \text{where}$$

P_o is the proportion of agreement, and

P_e is the proportion of agreement expected by chance

Following the recording of the verbal classroom behaviors on specially-prepared tally sheets, the coded data were then placed into the appropriate matrix locations. Column and cell totals were subsequently computed and the percentages entered. The completed matrices were then combined into two master matrices, one containing all high FIAS scores, the other all low FIAS scores. From these master matrices the final tabulation was made for computer input and for statistical treatment.

Experimental Hypothesis

From the statement of the problem an experimental hypothesis was formulated.

> H.: The degree of bureaucratic orientation of student teachers is related to their verbal classroom behavior under actual teaching conditions.

Specific Hypotheses:

H.1.   Student teachers with high and low bureau-
       cratic orientation who profess to be un-
       exposed to interaction analysis will not
       differ in their use of indirect influence
       under actual teaching conditions.

H.2.   Student teachers with high and low bureau-
       cratic orientation and who profess to be
       unexposed to interaction analysis will not
       differ in their use of direct influence
       under actual teaching conditions.

H.3.   Student teachers with high and low bureau-
       cratic orientation who profess to be un-
       exposed to interaction analysis will not
       differ in their acceptance of student feel-
       ings under actual teaching conditions as
       evidenced by the student teacher's verbal
       classroom behavior.

H.4.   Student teachers with high and low bureau-
       cratic orientation and who profess to be un-
       exposed to interaction analysis will not
       differ in their use of praise and encourage-
       ment under actual teaching conditions.

H.5.   Student teachers with high and low bureau-
       cratic orientation who profess to be un-
       exposed to interaction analysis will not
       differ in their acceptance and clarifica-
       tion of student ideas under actual teaching
       conditions as evidenced by the student teach-
       er's verbal classroom behavior.

H.6.   Student teachers with high and low bureau-
       cratic orientation who profess to be un-
       exposed to interaction analysis will not
       differ in their use of student critique and
       justification of authority under actual
       teaching conditions.

H.7.   Students - whose student teachers score high
       and low in bureaucratic orientation and who
       profess to be unexposed to interaction analy-
       sis - will not differ in their use of extended
       responsive verbal classroom behavior under
       actual teaching conditions.

H.8.   Students - whose student teachers score high
       and low in bureaucratic orientation and who
       profess to be untrained in interaction analy-
       sis - will not differ in their use of initiated
       verbal classroom behavior under actual teaching
       conditions.

H.9.   Students - whose student teachers score high
       and low in bureaucratic orientation and who
       profess to be untrained in interaction analy-
       sis - will not differ in their use of student-
       to-student interaction under actual teaching
       conditions.

H.10. Students - whose student teachers score high
       and low in bureaucratic orientation and who
       profess to be untrained in interaction analy-
       sis - will not differ in their use of student-
       to-student interaction with silence or con-
       fusion under actual teaching conditions.

Treatment of the Data

Because the number of subjects in the two independent
were relatively small (N=13), Student's t-test was used
as the most appropriate test of the ten specific hull
hypotheses when the standard deviation (SD) of the popu-
lation mean is not known. Thus a total of ten separate
t-tests were calculated, one for each specific null hypo-
thesis statement. Under the assumption that the distri-
bution is normal and that μ_1 is equal to μ_2, the following
formula was used:

$$(1) \quad t = \frac{\overline{X}_1 - \overline{X}_2}{S_{E_{(\overline{X}_1 - \overline{X}_2)}}}, \quad \text{where}$$

the numerator represents the difference between the two means and the denominator indicates the standard error of the difference between the means.

Instead of using the two separate variances from each of the samples as an independent estimate of the population variance, the two sample variances have been pooled to supply a more representative estimate of the population variance. Prior to pooling the two variances, the following F-test has been executed:

$$(2) \qquad F = \frac{s_1^2}{s_2^2} \text{ , where}$$

s_1^2 is the larger of the two variances and

s_2^2 is the lesser of the two sample variances.

At this point, the specific null hypotheses of no differences between the variances were tested. It was decided that if F had been found significant for any pair of groups, formula (3) would have been used in computing the standard error of the differences between the two means.

$$(3) \qquad S_{E(\overline{X}_1 - \overline{X}_2)} = \sqrt{S_{E\overline{X}_1}^2 + S_{E\overline{X}_2}^2}$$

Since the specific null hypotheses were allowed to stand because of a non-significant F, the variances were

pooled. Formula (4) shows the computation for the
standard error of the difference between the two means
applying the pooled variances.

$$(4) \quad S_{E_{(\overline{X}_1 - \overline{X}_2)}} = \sqrt{\frac{\Sigma\, x_1^2 + \Sigma\, x_2^2}{(N_1 + N_2) - 2}}\left(\frac{1}{N_1} + \frac{1}{N_2}\right)$$

Summary

The primary objective of this chapter has been to
name and explain the standardized instruments employed
for data gathering and the manner in which these measuring
devices have been applied in this study.

The randomly selected sample group is composed of
158 student teachers, enrolled in education seminars at
Oregon State University, and serving their student teach-
ing assignment with high schools located within the
Willamette Valley region. The WEPS and a brief demograph-
ic data questionnaire has been administered to the sample
group within the first two weeks of their student teaching.
High and low scorers (85th percentile and 15th percentile
rank, respectively) of the WEPS were selected for in-class
observation to assess their verbal interaction with stu-
dents, using the FIAS.

Each student teacher of the high and low scoring
category was observed for six 20-minute intervals under

actual teaching conditions. Observer reliability was
estimated by means of Scott's Reliability Coefficient
(pi) which never dropped below the .83 mark.

Student's t-test and Bartlett's F-test were utilized
as statistical tests of the ten specific null hypotheses.

CHAPTER IV

PRESENTATION OF THE FINDINGS

Introduction

The results of the statistical tests of the ten specific null hypotheses are presented in this chapter. As a result of the statistical analyses of the stated ten specific null hypotheses, the decision whether to retain or reject the experimental hypothesis of this study will be made.

A decision to retain a specific null hyptohesis was reached if the t-test yielded results which would indicate a non-significant difference between the means when comparing the dependent and independent variables of this study. The independent variables, high and low bureaucratic orientation of student teachers, are thus compared with the dependent variables of the matrix[15] constructed with the FIAS data.

The level of confidence chosen at the onset of the study for the analysis was .05 as the criterion of significance for all ten specific null hypotheses.

Following the presentation of the statistical data,

[15]Figure 4: Description of Verbal Classroom Behavior, page 43, shows the procedure for matrix interpretation and matrix location of the dependent variables.

a brief summary will be offered which includes a verbal classroom behavior profile for student teachers with high and low bureaucratic orientation, as stipulated in this research.

Specific Null Hypotheses

The specific null hypotheses enumerated in abreviated form are shown in Table III.

Since the t-test for the specific null hypotheses produced non-significant differences between the means, all the specific null hypotheses in this study were retained.[16]

Table IV shows the statistical data of the experimental sample. The rather obvious size of the standard deviations (SD) of the sample means indicates the large variabilities among the experimental sample groups.

Experimental Hypothesis

The previously formulated experimental hypothesis states:

H.: The degree of bureaucratic orientation of student teachers is related to their verbal classroom behavior under actual teaching conditions.

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[16]The specific null hypotheses are described in detail on pages 49-50, Chapter III.

TABLE III. Statistical Data: Specific Hypotheses Tests

Hypotheses	Type of Verbal Behavior	Alpha Level	df (n-1)	Tabular t-Value	Computed t-Value	Decision H_o
H.1	Indirect teacher influence	.05	25	2.060	-0.383	Retain
H.2	Direct teacher influence	.05	25	2.060	0.042	Retain
H.3	Acceptance of student feeling	.05	25	2.060	-0.286	Retain
H.4	Praise and encouragement	.05	25	2.060	-0.036	Retain
H.5	Acceptance of student ideas	.05	25	2.060	-0.389	Retain
H.6	Criticism and justification of authority	.05	25	2.060	0.016	Retain
H.7	Extended student responsive verbal behavior	.05	25	2.060	1.337	Retain
H.8	Extended student initiated verbal behavior	.05	25	2.060	0.270	Retain

TABLE III. Statistical Data: Specific Hypotheses Tests (cont.)

Hypotheses	Type of Verbal Behavior	Alpha Level	df (n-1)	Tabular t-Value	Computed t-Value	Decision H_o
H.9	Student-to-student interaction	.05	25	2.060	0.229	Retain
H.10	Student-to-student interaction with silence or confusion	.05	25	2.060	0.374	Retain

TABLE IV. Statistical Data of the Experimental Sample

Hypotheses	Sample Size High*	Low*	Sample Means High*	Low*	Sample Standard Deviation High*	Low*
H.1	52	51	81.519	86.667	63.406	72.745
H.2	39	40	356.923	352.700	379.277	510.443
H.3	13	13	41.0	44.0	28.062	25.285
H.4	13	13	62.462	62.923	30.223	34.702
H.5	13	13	49.692	54.615	27.430	36.507
H.6	13	13	21.385	21.231	22.882	24.655
H.7	13	13	30.846	16.923	36.381	9.323
H.8	13	13	287.692	276.0	106.808	113.741
H.9	52	52	84.942	79.135	130.737	127.813
H.10	76	77	66.421	59.740	111.893	108.975

*High and Low implies the degree of bureaucratic orientation as measured by the Work Environment Preference Schedule.

Note: Hypotheses H.1, H.2, H.9, and H.10 reflect sample sizes which seem different from the remaining samples, because the areas and cells were combined as shown in Figure 5.

The experimental hypothesis has not been directly tested through statistical analysis but, because <u>no</u> specific hypotheses were rejected, the decision regarding the experimental hypothesis was that it was <u>not supported</u>.

Summary of the Findings

<u>All</u> the stated ten specific null hypotheses tested in this study were <u>retained</u> at the .05 level of confidence. Thus, the relationship between the independent and independent variables in this study was <u>not</u> shown to be significant.

The rather large standard deviations (SD) of the sample means seem typical for this experimental sample group, indicating considerable variation of verbal classroom behavior characteristics with varying degrees of bureaucratic orientation.

In compliance with the results of the empirical tests of the ten specific null hypotheses, the decision regarding the experimental hypothesis was that it was <u>not supported</u>. On that basis, this profile of student teachers' verbal classroom behavior under actual teaching conditions, as measured by the FIAS, can be announced:

Under actual teaching conditions, there is <u>no</u> difference in the verbal classroom behavior of

student teachers high and low in bureaucratic orientation, nor in the verbal classroom behavior of their students.

A more detailed discussion of the findings of this study, its implication for theory, and an interpretation of the results is presented in the next chapter.

CHAPTER V

DISCUSSION OF THE FINDINGS

Introduction

The established purpose of this study, as stated in
Chapter I, was to determine whether or not a relationship
exists between the verbal classroom behavior of student
teachers who profess to be unexposed to Flanders' Inter-
action Analysis System (FIA) and their degree of bureau-
cratic orientation. The Work Environment Preference
Schedule (WEPS) was used to measure the degree of bureau-
cratic orientation of student teachers, while the Flanders
Interaction Analysis System (FIAS) was employed to assess
the socio-emotional classroom climate.

The purpose of this study was then expressed in a
statement of the problem, followed by ten subproblems,
which led to the formulation of an experimental hypothesis
and ten specific null hypotheses. The ten specific
null hypotheses were statistically tested and the re-
sults were described in Chapter IV.

Because no statistically significant differences
were found among the student teachers' verbal classroom
behavior under actual teaching conditions when compared
with their degree of bureaucratic orientation, a brief

discussion of the findings of this study with implications for theory on student teachers' influence in the classroom is warranted.

It must be born in mind that, since student teachers' reactions to a given school climate can not be accurately predicted without sufficient knowledge of the characteristics that they bring into the experimental settings, some of the comments offered here shall remain conjectural in nature.

Interpretation of the Results

The use of (1) direct or (2) indirect influence, (3) the acceptance of students' feelings, (4) the use of praise and encouragement, (5) the acceptance and clarification of students' ideas, and (6) the amount of student critique and justification of authority, appeared to be unaffected to any significant level, by the degree of bureaucratic orientation the student teachers professed. Their students showed no significant difference in (7) their extended responsive or in (8) their extended initiated verbal classroom behavior. Neither is there any significant difference in (9) their student-to-student interaction with (10) silence or confusion under actual teaching conditions in the classroom.

Considering the findings of the investigation it can

be stated that student teachers' degree of bureaucratic
orientation has not been shown to affect, to any appreci-
able degree, the verbal classroom behavior of student
teachers and their students under actual teaching condi-
tions in the classroom.

Implication for Theory

The results of the investigation, as measured by
the WEPS and the FIAS, indicate that student teachers'
verbal classroom behavior is not significantly related to
their degree of bureaucratic orientation under conditions
such as those encountered by this investigation. No valid
basis for judgment is provided by the study for the as-
sertion that there is a difference between the two experi-
mental sample groups with respect to facilitating more
conducive learning climates or to managing classroom ac-
tivities more effectively.

The apparent inability of the FIAS to measure how
direct or indirect influence in the classroom is utilized
for behavior control prompts the investigator to question
any assumption which equates bureaucratic orientation with
direct or indirect influence in the classroom.

Gordon (1970) implied that bureaucratic orientation
and person-valuing tendencies of placing a lower value on
treating other people with consideration are related.

The findings of this investigation do not support this relationship at the student teachers' level. No significant relationship has been established by this study between student teachers' degree of bureaucratic orientation and their influence on the classroom climate, their acceptance of students' feelings and ideas, their use of praise and encouragement, their use of student critique and justification of authority. The investigator suggests that the degree of bureaucratic orientation of student teachers does not discriminably affect their treatment of their students under actual teaching conditions.

The investigator infers, supported by the findings of the study, that the students' inclination to ask questions or to initiate verbal contributions to class discussions is not appreciably affected by the degree of bureaucratic orientation their student teacher possess.

The investigator also suggests that the amount of student-to-student interaction with silence or confusion can not be reliably predicted based on the degree of bureaucratic orientation of their student teachers.

It can also be inferred that under actual teaching conditions student teachers with a high degree of bureaucratic orientation behave verbally in much the same way as student teachers with low degrees of bureaucratic orientation.

Implications to Theory of Classroom Learning

The investigation was designed to ascertain whether or not, student teachers high in bureaucratic orientation do in fact possess verbal classroom behaviors which distinguish them from student teachers with low bureaucratic orientation.

The findings of the investigation indicate that student teachers' verbal classroom behavior is not significantly related to their degree of bureaucratic orientation.

Within the limitations of the investigation the investigator suggests that, since student teachers with differing degrees of bureaucratic orientation do not behave verbally significantly differently in the classroom under actual teaching conditions, no particular conditions can be specified or approaches advocated under which learning may be maximized.

Classroom behavior control has been shown (B. Anderson, 1970) to be related to student alienation and both, bureaucratization and one dimension of alienation (powerlessness) are known to be negatively associated with student achievement. On that premise that the need for classroom control does exert an appreciable effect on student learning and that its expression affects the overall socio-emotional classroom climate, the investigator

suggests that the findings of the study do <u>not</u> support any contention that student teachers with differing degrees of bureaucratic orientation facilitate learning in the classroom to any substantially different degree.

Investigator's Comments

The comments that follow are the opinions of the investigator which reflect upon the findings of the study but which are <u>not</u> statistically supported. The premise of the ensuing postulations are solely founded on the investigator's cursory and personal observations of student teachers during the study and on previous classroom teaching experience.

It seemed to the investigator that the more bureaucratically oriented student teachers tend to subordinate themselves more to the prevailing socio-organizational school climate than do student teachers with low degrees of bureaucratic orientations. The latter seemed to lean more toward subordination to the student body attitudinal structure rather than the organization itself. Regardless of the degree of bureaucratic orientation, student teachers seemed to exhibit noteworthy desires for the security that following rules, regulations, and standard teaching

procedures afford.[17]

While nearly complete confidence in expert judg-
ment[18] appeared to apply equally well to both experi-
mental sample groups, little authority conflict between
student teachers' professional autonomy and school author-
ity seemed evident. This may be attributable to student
teachers' lack of teaching experience and as yet in-
adequately developed professional attitude. Nevertheless,
student teachers with high degree of bureaucratic orien-
tation seemed to exhibit a more profound need for the
security provided by organizational identification and
conformity to in-group norms.[19]

Suggestions for Future Research

The following recommendations for additional research
are contributed:

1. A similar study should be conducted employing
   the WEPS in conjunction with means for assess-
   ing the verbal classroom interactive behavior
   of student teachers other than the FIAS.

2. A study incorporating secondary or primary
   education teachers should be initiated in order

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[17] See description of Rule Conformity, page 13!
[18] See description of Compartmentalization, page 12!
[19] See description of Traditionalism, page 14!

to establish the relationship, if any, between organizational expectations and teacher verbal classroom behavior.

3. A study of the degree to which bureaucratically oriented student teachers utilize direct or indirect means of influencing the classroom climate should be undertaken.

4. A study of the relationship of bureaucratic orientation of student teachers and their verbal classroom behavior as compared with those of their cooperating teachers when observed under actual teaching conditions should prove interesting.

5. An investigation of the relationship, if any, between bureaucratic orientation and other personality traits should be begun.

Summary

This chapter served to reiterate the purpose of the study and to offer an interpretation of the findings. Based on the statistical analysis, the implication for theory has been discussed, followed by personal opinions

of the investigator and suggestions for further study.

The FIAS quite adequately assesses the type of influence student teachers exert under actual teaching conditions in the classroom, but fails to measure the manner in which either direct or indirect teacher influence is utilized. The investigator questions any assumption which equates bureaucratic orientation with direct or indirect influence in the classroom. Data from this study do not provide a valid basis from which to infer that student teachers with varying degrees of bureaucratic orientation differ in their verbal classroom behavior under actual teaching conditions. Nor is there any justification for any assertion that students of student teachers with a high degree of bureaucratic orientation differ in their verbal interactive classroom behavior from those students of student teachers with a low degree of bureaucratic orientation.

Based on the findings of the study, student teachers in both experimental sample groups do not behave verbally significantly differently in the classroom under actual teaching conditions enough to warrant the specifying of particular conditions under which learning may be maximized.

The succeeding chapter summarizes the study in its entirety.

CHAPTER VI

SUMMARY OF THE STUDY

Introduction

The aim of this chapter is to summarize briefly the entire study, to review the topics of each chapter, and to provide the reader with a concise overview.

Background

Much attention has been focused on the congruence between individual and organizational variables, such as the student teacher's need system and the predominant socio-organizational climate. In view of the extant variation of bureaucratic organizations, the identification of individuals who are especially adaptable to a hierarchical system is a matter of practical concern and value. Individuals tend to be shaped by their work environment and seem to take on some bureaucratic coloration. The implication that the degree of adaptability to bureaucratic systems has some conceivable influence on the type of verbal classroom behavior exhibited by the student teacher is questioned by the results of this study.

Purpose

The purpose of the study was to determine the rela-
tionship of student teachers' commitment to the set of
values, attitudes and behaviors that are characteristi-
cally fostered and rewarded by bureaucratic organizations
and their verbal classroom behavior under actual teaching
conditions.

Statement of the Problem

The study was initiated in order to ascertain whether
or not, under actual teaching conditions, the degree of
bureaucratic orientation of student teachers who pro-
fessed to be unexposed to Flanders' Interaction Analysis
System (FIAS) is in fact related to their verbal classroom
behavior.

Subproblems

The approach to the general problem was undertaken
by identifying those student teachers who scored high and
low in bureaucratic orientation, as measured by the Work
Environment Preference Schedule (WEPS). "High" and "low"
are defined as Percentile Ranks of 85 and above and 15 and
below on the scale, respectively. High and low groups
were compared with respect to their verbal classroom
behavior. The subproblems are:

Subproblem (1)

  To identify student teachers' use of indirect in-
fluence on the socio-emotional classroom climate
under actual teaching conditions as evidenced by
the student teachers' verbal classroom behavior.

Subproblem (2)

  To identify student teachers' use of direct in-
fluence on the socio-emotional classroom climate
under actual teaching conditions as evidenced by
the students teachers' verbal behavior.

Subproblem (3)

  To identify student teachers' acceptance of student
feelings in the classroom under actual teaching con-
ditions as evidenced by the student teachers' ver-
bal classroom behavior.

Subproblem (4)

  To identify student teachers' use of praise and
encouragement of students in the classroom under
actual teaching conditions as evidenced by the
student teachers' verbal classroom behavior.

Subproblem (5)

  To identify student teachers' acceptance and clari-
fication of student ideas in the classroom under
actual teaching conditions as evidenced by the
student teachers' verbal classroom behavior.

Subproblem (6)

  To identify student teachers' use of student
critique and justification of authority in the
classroom under actual teaching conditions as evi-
denced by the student teachers' verbal classroom
behavior.

Subproblem (7)

> To identify students' use of extended responsive
> verbal behavior under actual teaching conditions
> set by student teachers.

Subproblem (8)

> To identify students' use of extended initiated
> verbal classroom behavior under actual teaching
> conditions.

Subproblem (9)

> To identify students' use of student-to-student
> verbal interaction under actual teaching conditions.

Subproblem (10)

> To identify students' use of student-to-student ver-
> bal interaction with silence or confusion under
> actual teaching conditions.

Related Literature and Research

Research and literature applicable to this study have
been cited as appropriate under bureaucratic orientation
and socio-emotional climate headings. Max Weber (1922)
who is considered the founder of bureaucratic studies finds
bureaucracy a composite institutional manifestation which
tends to breed inflexibility and depersonalization. Never-
theless, some bureaucratic structure is advised by Weber
to elaborate systematic routine procedures in the interest
of fiscal regularity and operational consistency. Barry
Anderson (1970) observed an association between school

bureaucratization and student alienation, while MacKay (1964) discovered an inverse correlation between school bureaucratization and student achievement.

Lippitt's early studies in 1940 on social clubroom climates ushered an era of intense research on the effects of socio-emotional climates on teaching behavior and learning. He found that different leadership styles produced different social climates and resulted in different group and individual behaviors. Withall (1949) established the "climate index" discriminating between learner-centered and teacher-centered behavior. He noted that the former behavior elicited significantly more positive emotional reactions toward teachers than did the latter. Summers (1970) uncovered the relationship of organizational climate with teaching behaviors which related directly to discipline. Hanny (1966) and Piele (1968) examined the relationship of open and closed minded teachers and their verbal classroom behavior.

The review of the literature is indicative of need for further research to identify the relationships between bureaucratic orientation and personality traits associated with that behavior to verbal classroom behavior.

Methodology

The sample group for this study has been selected at

random from a population of 180 student teachers enrolled in education seminars at Oregon State University, Corvallis, Oregon. The selected student teachers were divided into two groups according to their score on the Work Environment Preference Schedule. Those student teachers in the low group scored below the 15th percentile rank, while those belonging to the high group scored above the 85th percentile rank, as compared to the norm group.

Thirteen high and 13 low scorers were then selected at random from this group and observed in the classroom under actual teaching conditions for a total of six 20-minute class sessions. The classroom visitations served to observe, classify, and record the verbal classroom behavior of these student teachers and their students using the Flanders Interaction Analysis System. The observer reliability has been checked by means of the Scott's Coefficient of Reliability which never fell below the .83 mark.

Instruments

Two standardized instruments were employed in this study. The degree of bureaucratic orientation of student teachers was measured by means of the Work Environment Preference Schedule (WEPS) developed by Gordon (1973). The verbal classroom behavior under actual teaching

conditions was assessed with the aid of the Flanders
Interaction Analysis System (FIAS), designed by Flanders
(1962). A very brief demographic data sheet has been
attached to the WEPS, intended solely to identify per-
sonal data about the subjects of the study. Table I and
II reflect the information collected.

Treatment of the Data

The ten specific null hypotheses were tested using
the Student's t-test after the variables had been pooled.
The assumption of homogeneous variances was tested with
Bartlett's F-test. The .05 level of confidence was chosen
as the criterion of significance. The experimental hypo-
thesis was not subjected to direct statistical treatment,
but a decision was made based upon the outcome of the ten
specific null hypotheses.

Findings of the Study

Student's t-test revealed no significant differences
between the means on all ten specific null hypotheses.
Table III shows the results of the statistical analysis.
All ten specific null hypotheses were retained. Table IV
reflects the statistical data of the ten specific null
hypotheses. Because no specific null hypotheses were re-
jected, the decision regarding the experimental hypothesis

was that it was <u>not</u> supported:

> The degree of bureaucratic orientation of
> student teachers is related to their
> verbal classroom behavior under actual
> teaching conditions.

Implication

Examination of the results of this investigation yields no support for the hypothesis that student teachers' verbal classroom behavior is related to their degree of bureaucratic orientation. No valid basis for judgment is provided by this study for the assertion that there is a difference between the two experimental groups in the sample with respect to facilitating more conducive learning climates or to managing classroom activities more effectively.

Implications of bureaucratic orientation as a student teacher personality trait on the overall socio-emotional classroom climate must be made with care and cannot be based on the interpretations of this study alone, but perhaps, in conjunction with pertinent findings of researchers such as Flanders, Amidon, Anderson <u>et</u> <u>al</u>.

Further research investigating the relationship between teachers' bureaucratic orientation and their verbal and non-verbal classroom behavior, measured by other means than in this study, have been suggested.

As a concluding thought it should be considered that, as a society, we are moving away from one predominant value system toward another. Peterson and Park (1975) see a reexamination of our humanistic values with an emerging trend toward valuing persons over things. In complex societies such as ours, conflict and tension develop at the interface of coexisting systems where people, decisions, and activities overlap.

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APPENDIX

TABLE I

DEMOGRAPHIC DATA ON AGE, SEX, UNDERGRADUATE
GRADEPOINT AVERAGE OF SUBJECTS IN
THE EXPERIMENTAL SAMPLE

Bureaucratic Orientation	Age (N=26)*			
	Under 21	22-25	26-29	30 and above
High	7.7%	26.9%	3.8%	11.5%
Low	3.8%	30.8%	11.5%	3.8%

Bureaucratic Orientation	Sex	
	Male	Female
High	34.6%	15.4%
Low	23.1%	26.9%

Bureaucratic Orientation	Undergraduate Gradepoint Average			
	Less than 2.5	2.51-3.00	3.01-3.50	3.51+
High	15.4%	26.9%	7.7%	0%
Low	3.8%	15.4%	23.1%	7.7%

*(N=26) is the sample upon which the percentages shown
in Table I are based. Since (N) will remain unchanged
for the entire demographic data, a repeated mention is
avoided.

TABLE II

DEMOGRAPHIC DATA ON SIZE OF SCHOOL, SUBJECT TAUGHT, AND AFFILIATION WITH PROFESSIONAL ORGANIZATIONS OF SUBJECTS IN EXPERIMENTAL SAMPLE

Bureaucratic Orientation	Size of School by Enrollment			
	Under 300	301-600	601-999	1000 or more
High	3.8%	15.4%	15.4%	15.4%
Low	3.8%	3.8%	38.5%	3.8%

Bureaucratic Orientation	Affiliation with Professional Organizations		
	0-1	2-5	6 or more
High	15.4%	34.6%	0%
Low	23.1%	23.1%	3.8%

Bureaucratic Orientation	Engl. Ed.	Home Ec.Ed.	Agri. Ed.	Soc. Stud.
High	0%	3.8%	3.8%	3.8%
Low	19.2%	7.7%	0%	3.8%

Bureaucratic Orientation	Sci. Ed.	DE+ Bus.Ed.	Ind. Ed.	P.E.
High	7.7%	11.5%	19.2%	0%
Low	7.7%	0%	7.7%	0%